yellow band near tip; base of tarsi slightly lighter; coxæ and trochanters yellowish or pinkish. Thorax beneath pinkish; venter reddish. First segment of beak brownish yellow, remainder blackish.

Male, about 5 mm. in length; similar to female.

PROTHETELY IN THE ELATERID GENUS MELANOTUS.

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Two papers on the abnormal phenomenon termed prothetely appeared last year in Psyche. In one of these papers[1] six bibliographical references were given on the subject and in the other paper[2] a seventh was added to this list. Dr. Adam Böving brought another interesting paper on the same subject, published in 1914,[3] to my attention, and in looking over the literature two more papers were located.[4,5]

The present paper deals with a very striking case observed at the United States Entomological Laboratory in Hagerstown. The subject was *Melanotus communis* Gyll.

On May 18, 1915, Mr. J. J. Davis sent the writer fifty-eight living larvæ of *Melanotus communis* Gyll., collected near Cincinnati, Ohio, with the note that they were found damaging corn on river bottom land. These larvæ were shipped in salve boxes filled with moist Sphagnum moss, and when received were isolated in similar boxes partly filled with moist earth and fed seed corn. The boxes were all placed in galvanized iron trays and the contents examined, cast skins removed, soil moistened when necessary, and new food supplied, weekly.[6]

Strickland[7] suggested as an explanation of the phenomenon of prothetely that it "is usually caused by keeping the larvæ at an abnormally high temperature." The temperature to which this particular larva was subjected could not have varied to any appre-

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[1] Williams, F. X., 1914, Psyche, Vol. XXI, p. 126.

[2] Barber, H. S., 1914, Psyche, Vol. XXI, p. 190.

[3] Kemner, A., 1914, Ent. Tidsk. (Swedish), Vol. XXV, pt. 1–2, pp. 87–95.

[4] Tragardh, I., 1912, Fauna och Flora, pp. 245–255.

[5] Peyerimhoff, P. de, 1911, Bull. Soc. Ent. France, p. 327.

[6] The writer was ably assisted in this work by Messrs. H. L. Parker and W. E. Pennington of the Station staff.

[7] Strickland, E. H., 1911, Biol. Bull., Vol. 21, pp. 313–327.

ciable extent from that of the fifty-seven other larvæ of the same series in the same trays. Up to the date of writing, September 23, 1915, three adults have emerged from this material, all of which appear to be perfectly normal, only seven of the larvæ have died and the remainder are moulting normally and feeding freely. In this same type of cage and in the same insectary, we have been carrying on experiments with about 2,000 Elaterid larvæ from all parts of the United States and the West Indies.

However, this is the only instance of prothetely that we have ever observed. The soil with which these cages are filled is all

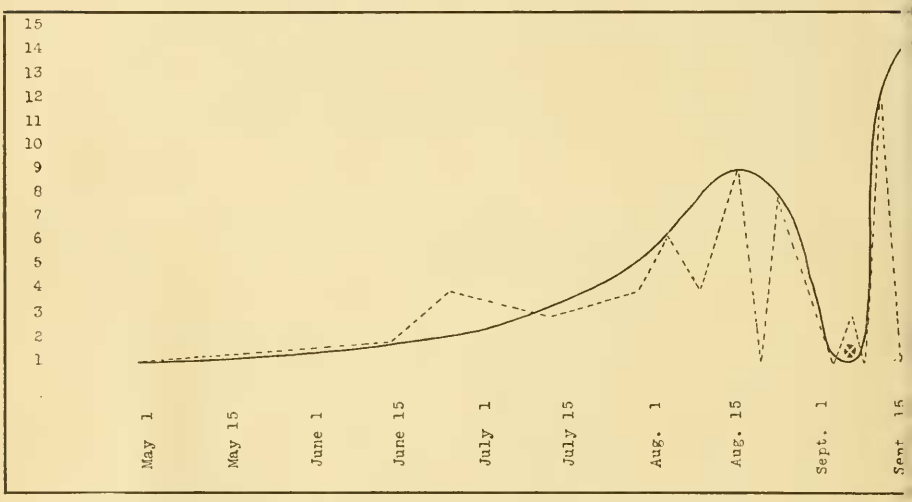
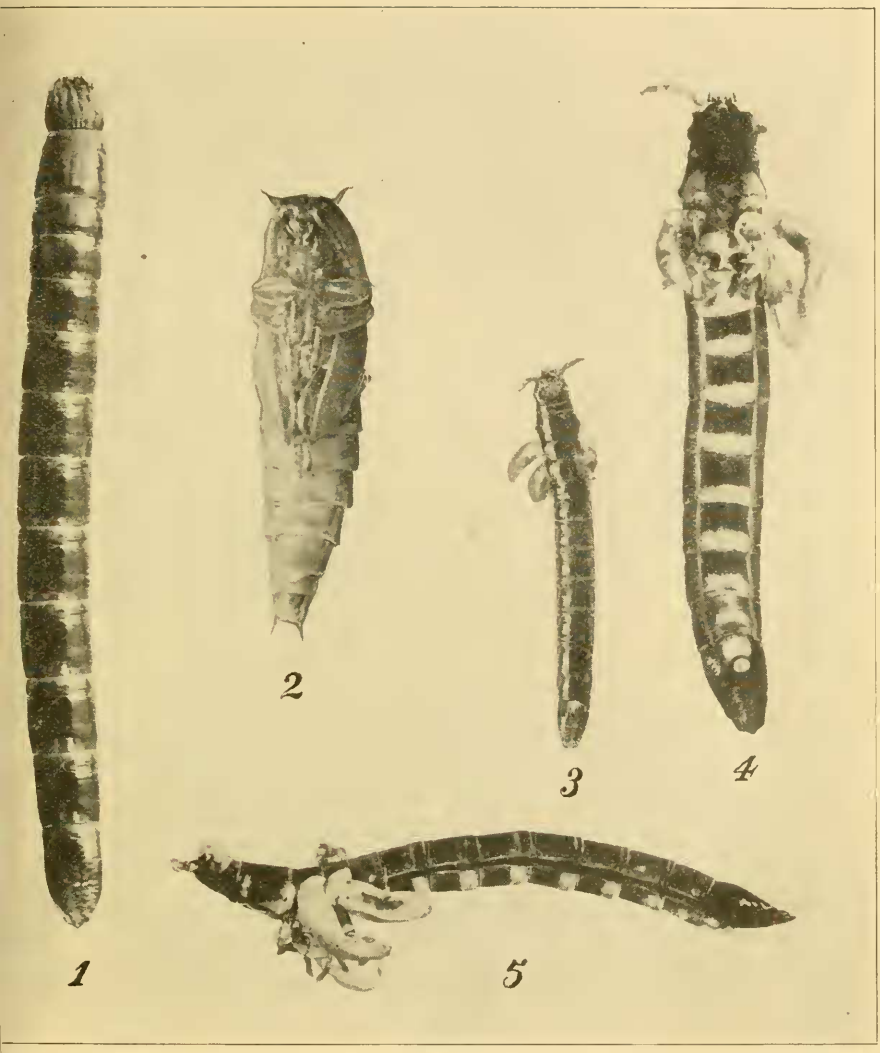


Fig. 1. Plotted curve of *Melanotus* molting periods. Cross indicates point at which prothetelous larva appeared. The dotted lines connect actual record points.

taken from one potting bench. The amount and kind of food, I believe, can be eliminated as a factor in this particular instance as our larvæ are always supplied with an excess of food. The lids of the boxes, which we use as cages, fit with varying degrees of tightness and the rate of evaporation is, therefore, very inconstant in any given series of cages. On account of this, the cages are only watered when, in the judgment of the examiner, it is necessary. This introduces a large personal factor and could easily result in a cage becoming much more dry or moist than the other cages of the same series. As this seems to be the only variable, I am inclined



l and prothetelous larva and normal pupa of *Melanotus communis*. Fig. 1, dorsum of normal
ig. 2, ventron of pupa. Fig. 3, dorsum of prothetelous larva. Fig. 4, ventron of prothetelous
ig. 5, lateral aspect of prothetelous larva.